McGuire 1
3Q/2005 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Comply With RCS Leakage Detection TS for Containment Radiation Gaseous Monitors
A non-cited violation of Technical Specification (TS) 3.4.15, Reactor Coolant System (RCS) Leakage Detection Instrumentation, was identified by the inspectors for failing to take actions required for containment radiation gaseous monitors being inoperable. Specifically, the monitors were unable to detect a 1 gpm RCS leak in 1 hour due to current activity concentrations (i.e., < 0.1 percent failed fuel) and TS required Actions B.1 (24-hour containment atmosphere sample) or B.2 (24-hour RCS water inventory balance) were not performed. The finding is greater than minor because the containment particulate and gas channel radiation monitors were not capable of performing the design bases function of alerting control room operators of elevated reactor coolant system unidentified leakage, for an extended period of time. This inoperability resulted in a potential impact on reactor safety and adversely affected the availability and reliability of the barrier integrity equipment performance attribute of the initiating events cornerstone. The finding was of very low safety significance because other methods of reactor coolant system leak detection were available to the licensee and no actual leakage above 1 gpm was indicated through the reactor coolant system water balance surveillance. This issue contained elements of problem identification and resolution, as well as human performance, in that licensee operations and engineering personnel determined the radiation monitors to be operable without consideration of all available information. (Section 1R15)
Inspection Report# : 2005002*(pdf)*

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have Adequate Surveillance Procedures for RCS Leakage Detection Instrumentation
A non-cited violation of TS 5.4.1.a was identified by the inspectors for failing to establish, implement, and maintain adequate Reactor Coolant System Leakage Detection Instrumentation surveillance procedures for surveillance requirement (SR) 3.4.15.2, channel operational test of containment atmosphere radioactivity monitor; SR 3.4.15.3, channel calibration of containment floor and equipment sump (F&ES) level monitoring system; SR 3.4.15.4, channel calibration of containment atmosphere radioactivity monitor; and SR 3.4.15.5, channel calibration of containment ventilation condensate drain tank (VCDT) level monitor. Procedures for containment radiation particulate and gas monitors had not set the alarms to leakage values equivalent to 1 gallon per minute in 1 hour and had not tested the end device used by the operators to provide alarm indication of potentially excessive reactor coolant system unidentified leakage for multiple containment leakage monitors, including level indication (F&ES and VCDT) and radiation monitors. The finding was greater than minor because the surveillance procedures had not provided assurance that the necessary quality of systems or components were maintained. Consequently, this resulted in a potential impact on reactor safety and adversely affected the availability and reliability of the barrier integrity equipment performance attribute of the initiating events cornerstone. The finding was of very low safety significance because excessive leakage had not existed based on reactor coolant inventory water balances and that the alarm indication functioned properly when tested. This issue contained elements of problem identification and resolution, in that the licensee's operability determination failed to adequately evaluate whether surveillance requirements had been met and actions to determine the "time to alarm" given current RCS activity levels were not prompt. (Section 1R22b.(1))
Inspection Report# : 2005002*(pdf)*

Significance: G Nov 05, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Corrective Action for Plant Equipment Issues - Two Examples
The inspectors identified the first example of a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, for failure to thoroughly evaluate and take timely corrective actions to resolve a problem with the Instrument Air (VI) supply to the actuator of steam admission valve 2SA-49AB, steam supply from the "B" steam generator to the Unit 2 turbine driven auxiliary feedwater pump (TDCAP). Specifically, following identification of a nitrogen leak into the redundant VI supply for the actuator of steam admission valve 2SA-49AB, the licensee isolated the redundant instrument air supply which backs up the nitrogen supply that maintains the TDCAP steam admission valve in the closed position. Subsequently, high nitrogen usage depleted the available nitrogen and allowed 2SA-49AB to open and inadvertently start the TDCAP. This auxiliary feedwater addition to all four steam generators resulted in an overpower condition and required operator action to mitigate the reactivity event. This finding was considered more than minor because it resulted in an inadvertent TDCAP start which delivered flow to all four steam generators. This caused an over-power condition in the reactor; thereby, affecting the Initiating Events Cornerstone objective by increasing the likelihood of events that upset plant stability. The finding was determined to be of very low safety significance because the operators implemented immediate manual actions to maintain reactor power less than 102% rated thermal power and the TDCAP

was able to perform its design function at all times due to the fail-safe design of the valve actuator to open. (Section 4OA2b.(3).1)

The inspectors identified a second example of a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, for failure to take adequate corrective actions to preclude repetitive issues with spent fuel pool (KF) cooling pump motor bearings. Specifically, repetitive challenges to KF pump motor bearings due to inadequate lubrication issues have resulted in increased unavailability of the pumps due to failures and increased unreliability of the system to meet its intended function. This finding was determined to be more than minor, in that it affected the mitigating system cornerstone objective by affecting the availability and reliability of the KF cooling system to maintain the spent fuel pool within the design limits. The improper venting of the spent fuel cooling pump motor oil level resulted in the repetitive failures of the pump motor. Failure of the pump motor adversely affects the ability to reliably maintain cooling in the spent fuel pool. This issue was determined to be of very low safety significance (Green) due to the availability of a redundant SFP cooling pump and because the allowable temperature limits were not exceeded. (Section 4OA2c.(3).1)
Inspection Report# : 2004008*(pdf)*

Mitigating Systems

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Timely Correction to Update the USFAR for the SSF
A non-cited violation was identified by the inspectors for untimely corrective action to update the Updated Final Safety Evaluation Report (UFSAR) related to the Standby Shutdown Facility (SSF). This issue was originally identified on February 17, 2004, and as of August 3, 2005, no corrective action had been taken to include the SSF in the UFSAR either by revision or approved change package for the next revision, and the corrective action item was closed. The issue was determined to be a severity level IV violation in NRC Inspection Report 05000369,370/2004003. The untimely corrective action was considered for being a cited violation in accordance with section VI.A.1 of the NRC Enforcement Policy. However, because the licensee completed and approved a UFSAR change package and adequately determined the cause of the untimely corrective action prior to the end of the inspection period, no additional information would be gained from the licensee providing a written response. This finding involved the crosscutting aspect of Problem Identification and Resolution. (Section 4OA2b.(1))
Inspection Report# : 2005004*(pdf)*

Significance: SL-IV Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Report a Condition Prohibited by Technical Specifications
A non-cited violation was identified by the inspectors for failure to report a condition prohibited by Technical Specifications related to past inoperability for main steam isolation valve 1SM-1, as required by 10 CFR 50.73. Based on the very low safety significance of the technical issue, this violation is categorized as a Severity Level IV violation under the NRC Enforcement Policy, Supplement I. (Section 4OA3.1)
Inspection Report# : 2005002*(pdf)*

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Multiple MSIV Inoperability
A non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, was identified by the inspectors for failing to take timely and adequate corrective actions to resolve adverse conditions that resulted in two Unit 1 main steam isolation valves (MSIVs) being inoperable beyond their Technical Specification allowed out-of-service time. The finding is considered greater than minor because it had a direct impact on the MSIVs' ability to perform their safety function, which is to close during a high energy line break or steam generator tube rupture. The finding affects both the Mitigating Systems and Barrier Integrity cornerstones, in that the failure to close impacts the equipment performance (reliability, availability) attribute and containment isolation (minimization of radiological releases) attribute, respectively. Based on the results of the Phase 3 SDP analysis, the finding is considered of very low safety significance. This issue contained elements of problem identification and resolution, as well as human performance, as it involved failures to properly evaluate data and deficiencies associated with the MSIVs; therefore, failing to take prompt corrective action to preclude the valves from becoming inoperable. (Section 4OA5.4)
Inspection Report# : 2005002*(pdf)*

Barrier Integrity

Significance: SL-IV Sep 30, 2005
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Update the UFSAR for CAPRMs
A non-cited violation was identified by the inspectors for failure to update the UFSAR as required by 10 CFR 50.71(e) related to inclusion of the license amendment request safety analysis information pertaining to the use of alternative instrumentation and procedures in place of seismic qualification for the Containment Atmosphere Particulate Monitors (CAPRMs). The issue was greater than minor because the failure to include in the UFSAR the alternative methodology for RCS leakage detection after a seismic event with unqualified CAPRMs, as described in the licensee's safety analysis, was material to the acceptability of the license amendment requests. The inspectors found no subsequent changes made to the facility that were based on the erroneous information in the UFSAR section. Consequently, this issue was considered to meet the criteria of a severity level IV violation. This finding involved the crosscutting aspect of Problem Identification and Resolution. (Section 4OA2b.(2))
Inspection Report# : 2005004*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedural Guidance for Conducting ISFSI Radiation Surveys
The inspectors identified a non-cited violation of Technical Specification 5.4.1(a) for failure to follow radiation protection procedures used to demonstrate compliance with 10 CFR Parts 20 and 72. Specifically, on August 24, 2004, Independent Spent Fuel Storage Installation (ISFSI) area dose rate surveys were conducted using portable radiation monitoring instrumentation, a RO-20 ion chamber survey meter, which did not cover the lower range of radiation levels expected (i.e., less than 0.05 millirem per hour), for selected boundary trending points. Further, the dose rate values documented (i.e., less than 0.1 mrem/hr) for the subject trending point locations, did not allow verification that the established procedural limits used to demonstrate compliance with 10 CFR Parts 20 and 72 requirements were met. This finding is more than minor in that the failure to accurately monitor and properly evaluate the quarterly dose rate results could prevent identification of unexpected/elevated dose rates associated with ISFSI operations and is associated with the Program and Process attribute of the Occupational Radiation Safety Cornerstone. The finding affects the cornerstone objective to prevent/minimize radiation exposure to personnel. The issue is of very low safety significance because the procedurally established dose rate limits are based on conservative occupancy factors, and results of proper dose rate surveys conducted prior and subsequent to the subject date were within established dose rate limits. (Section 2OS1)
Inspection Report# : 2005002*(pdf)*

Significance: G Mar 31, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Provide Adequate Breathing Air Capacity for Supplied-Air Respiratory Equipment
A self-revealing non-cited violation of 10 CFR 20.1703(e) was identified for use of inadequate in-service breathing air (VB) system equipment to supply ‘Delta Suit' respiratory protective equipment. Specifically, on March 25, 2004, available VB system capacity was inadequate to supply adequate air flow to six workers using supplied-air ‘Delta Suits' for steam generator (SG) work activities. The finding is more than minor in that it is associated with the Occupational Radiation Safety Cornerstone Plant Equipment and Instrumentation attribute and adversely affects the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radioactive material during routine civilian nuclear reactor operations. The issue is of very low safety significance because the flow monitoring equipment used to identify degraded or failed VB system operations alerted responsible staff. The subject SG workers immediately ceased work activities and exited the work area without any unexpected internal contamination or resultant doses. (Section 2OS3)
Inspection Report# : 2005002*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Nov 05, 2004
Identified By: NRC
Item Type: FIN Finding
PI&R SUMMARY
Overall, the licensee maintained an effective program for the identification and correction of conditions adverse to quality. The licensee was effective at identifying problems at a low threshold and entering them into the Corrective Action Program (CAP). In general, the licensee consistently prioritized issues in accordance with their CAP and routinely performed adequate evaluations that were technically accurate and of sufficient depth. Minor problems were identified related to thoroughness of corrective action program issue documentation. The inspectors considered the licensee's CAP tracking program adequately supported tracking of identified issues, as well as the proposed corrective actions to resolve problems and implement improvement initiatives. The system also supported the ability to perform efficient and productive CAP trending at a variety of plant employee levels.

Formal root cause evaluations for significant conditions adverse to quality were thorough and detailed. Corrective actions developed for lower level root and contributing causes were generally timely, effective, and commensurate with the safety-significance of the issue. Although the licensee incorporated a wide variety of root cause techniques, the use of simplistic root and apparent cause evaluations techniques for lower level Problem Investigation Process reports (PIPs), such as change analysis, could improve the reliability of apparent causes for some lower level issues and provide improved basis for PIP documentation. Several examples were identified where immediate corrective actions were not through or timely, as well as where vendor oversight could have been improved.

The licensee's periodic self-assessments and audits were effective in identifying deficiencies in the CAP and covered all areas of plant performance. Corrective actions for previous performance examples were being actively monitored within self-assessments and audits of the CAP. Overall, the ability to perform critical self-assessments was considered an effective program attribute, especially when identifying repetitive equipment issues. Assessments were also effective in evaluating human performance areas for improvement, which indicated an emphasis on continuous improvement. With few exceptions, reviews of sampled operating experience information were comprehensive. Improved review of operating experience between other sites from the same utility was noted.

Site management was adequately involved in the CAP and focused appropriate attention on significant plant issues. Previous non-compliance issues documented as non-cited violations were properly tracked and resolved via the corrective action program. The results of the last comprehensive corrective action program audit conducted by the licensee were properly entered and dispositioned in the corrective action program. Improvements were seen in the area of trending reviews identifying areas warranting increased management attention and focus. In one specific area of corrective actions for previous containment cleanliness issues, the licensee was not effective in precluding NRC identification of foreign material inadvertently left in the containment.

Based on discussions with plant personnel and the low threshold for items entered in the corrective action program database, the inspectors concluded that workers at the site generally felt free to raise safety concerns to their management and that a safety conscious work environment existed.

Inspection Report# : 2004008*(pdf)*

Last modified : November 30, 2005